

SEQUENCE LISTING

<110> Schweifer, Norbert
Scherl-Mostageer, Marwa
Sommergruber, Wolfgang
Abseher, Roger

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<151> 2000-07-07

<150> DE 101 19 294.0

<151> 2001-04-19

<150> US 60/243,158

<151> 2000-10-25

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ggt gaa ggc tca gca acc ctg atg tct gcc aac tac cca gaa ggc ttc Gly Glu Gly Ser Ala Thr Leu Met Ser Ala Asn Tyr Pro Glu Gly Phe	230	235	240	1014
cct gag gag ctc atg acg tgg cag ttt gtc gtt cct gca cac ctg Pro Glu Asp Glu Leu Met Thr Trp Gln Phe Val Val Pro Ala His Leu	245	250	255	1062
cgg gcc agc gtc tcc ttc ctc aac ttc aac ctc tcc aac tgt gag agg Arg Ala Ser Val Ser Phe Leu Asn Phe Asn Leu Ser Asn Cys Glu Arg	265	270	275	1110
aag gag gag cgg gtt gaa tac tac atc ccg ggc tcc acc acc aac ccc Lys Glu Arg Val Glu Tyr Tyr Ile Pro Gly Ser Thr Thr Asn Pro	280	285	290	1158
gag gtg ttc aag ctg gag gac aag cag cct ggg aac atg gcg ggg aac Glu Val Phe Lys Leu Glu Asp Lys Gln Pro Gly Asn Met Ala Gly Asn	295	300	305	1206
ttc aac ctc tct ctg caa ggc tgt gac caa gat gcc caa agt cca ggg Phe Asn Leu Ser Leu Gln Gly Cys Asp Gln Asp Ala Gln Ser Pro Gly	310	315	320	1254
atc ctc cgg ctg cag ttc caa gtt ttg gtc caa cat cca caa aat gaa Ile Leu Arg Leu Gln Phe Gln Val Leu Val Gln His Pro Gln Asn Glu	325	330	335	1302
				340

agc aat aaa atc tac gtg gtt gac ttg agt aat gag cga gcc atg tca 1350
Ser Asn Lys Ile Tyr Val Val Asp Leu Ser Asn Glu Arg Ala Met Ser
345 350 355

ctc acc atc gag cca cgg ccc gtc aaa cag agc cgc aag ttt gtc cct 1398
Leu Thr Ile Glu Pro Arg Pro Val Lys Gln Ser Arg Lys Phe Val Pro
360 365 370

ggc tgt ttc gtg tgt cta gaa tct cgg acc tgc agt agc aac ctc acc 1446
Gly Cys Phe Val Cys Leu Glu Ser Arg Thr Cys Ser Ser Asn Leu Thr
375 380 385

ctg aca tct ggc tcc aaa cac aaa atc tcc ttc ctt tgt gat gat ctg 1494
Leu Thr Ser Gly Ser Lys His Lys Ile Ser Phe Leu Cys Asp Asp Leu
390 395 400

aca cgt ctg tgg atg aat gtg gaa aaa acc ata agc tgc aca gac cac 1542
Thr Arg Leu Trp Met Asn Val Glu Lys Thr Ile Ser Cys Thr Asp His
405 410 415 420

cgg tac tgc caa agg aaa tcc tac tca ctc cag gtg ccc agt gac atc 1590
Arg Tyr Cys Gln Arg Lys Ser Tyr Ser Leu Gln Val Pro Ser Asp Ile
425 430 435

ctc cac ctg cct gtg gag ctg cat gac ttc tcc tgg aag ctg ctg gtg 1638
Leu His Leu Pro Val Glu Leu His Asp Phe Ser Trp Lys Leu Leu Val
440 445 450

ccc aag gac agg ctc agc ctg gtg ctg gtg cca gcc cag aag ctg cag 1686
Pro Lys Asp Arg Leu Ser Leu Val Leu Val Pro Ala Gln Lys Leu Gln
455 460 465

cag cat aca cac gag aag ccc tgc aac acc agc ttc agc tac ctc gtg 1734
Gln His Thr His Glu Lys Pro Cys Asn Thr Ser Phe Ser Tyr Leu Val
470 475 480

gcc agt gcc ata ccc agc cag gac ctg tac ttc ggc tcc ttc tgc ccg 1782
Ala Ser Ala Ile Pro Ser Gln Asp Leu Tyr Phe Gly Ser Phe Cys Pro
485 490 495 500

gga ggc tct atc aag cag atc cag gtg aag cag aac atc tcg gtg acc 1830
Gly Gly Ser Ile Lys Gln Ile Gln Val Lys Gln Asn Ile Ser Val Thr
505 510 515

ctt cgc acc ttt gcc ccc agc ttc caa caa gag gcc tcc agg cag ggt 1878
Leu Arg Thr Phe Ala Pro Ser Phe Gln Gln Glu Ala Ser Arg Gln Gly
520 525 530

ctg acg gtg tcc ttt ata cct tat ttc aaa gag gaa ggc gtt ttc acg 1926
Leu Thr Val Ser Phe Ile Pro Tyr Phe Lys Glu Glu Gly Val Phe Thr
535 540 545

gtg acc cct gac aca aaa aac aag gtc tac ctg agg acc ccc aac tgg 1974
Val Thr Pro Asp Thr Lys Ser Lys Val Tyr Leu Arg Thr Pro Asn Trp
550 555 560

gac cgg ggc ctg cca tcc ctc acc tct gtg tcc tgg aac atc agc gtg 2022
Asp Arg Gly Leu Pro Ser Leu Thr Ser Val Ser Trp Asn Ile Ser Val
565 570 575 580

ccc aga gac cag gtg gcc tgc ctg act ttc ttt aag gag cgg agc ggc 2070
Pro Arg Asp Gln Val Ala Cys Leu Thr Phe Phe Lys Glu Arg Ser Gly
585 590 595

gtg gtc tgc cag aca ggg cgc gca ttc atg atc atc cag gag cag cgg 2118
Val Val Cys Gln Thr Gly Arg Ala Phe Met Ile Ile Gln Glu Gln Arg
600 605 610

acc cgg gct gag gag atc ttc agc ctg gac gag gat gtg ctc ccc aag 2166
Thr Arg Ala Glu Glu Ile Phe Ser Leu Asp Glu Asp Val Leu Pro Lys
615 620 625

cca agc ttc cac cat cac agc ttc tgg gtc aac atc tct aac tgc agc 2214
Pro Ser Phe His His Ser Phe Trp Val Asn Ile Ser Asn Cys Ser
630 635 640

ccc acg agc ggc aag cag cta gac ctg ctc ttc tcg gtg aca ctt acc 2262
Pro Thr Ser Gly Lys Gln Leu Asp Leu Leu Phe Ser Val Thr Leu Thr
645 650 655 660

cca agg act gtg gac ttg act gtc atc ctc atc gca gcg gtg gga ggt 2310
Pro Arg Thr Val Asp Leu Thr Val Ile Leu Ile Ala Ala Val Gly Gly
665 670 675

gga gtc tta ctg ctg tct gcc ctc ggg ctc atc att tgc tgt gtg aaa 2358
Gly Val Leu Leu Ser Ala Leu Gly Leu Ile Ile Cys Cys Val Lys
680 685 690

aag aag aaa aag aca aac aag ggc ccc gct gtg ggt atc tac aat 2406
Lys Lys Lys Lys Thr Asn Lys Gly Pro Ala Val Gly Ile Tyr Asn
695 700 705

ggc aac atc aat act gag atg ccg agg cag cca aaa aag ttt cag aaa 2454
Gly Asn Ile Asn Thr Glu Met Pro Arg Gln Pro Lys Lys Phe Gln Lys
710 715 720

ggg cga aag gac aat gac tcc cat gtg tat gca gtc atc gag gac acc 2502
Gly Arg Lys Asp Asn Asp Ser His Val Tyr Ala Val Ile Glu Asp Thr
725 730 735 740

atg gta tat ggg cat ctg cta cag gat tcc agc ggc tcc ttc ctg cag 2550
Met Val Tyr Gly His Leu Leu Gln Asp Ser Ser Gly Ser Phe Leu Gln
745 750 755

cca gag gtg gac acc tac cg^g ccg ttc cag ggc acc atg ggg gtc tgt 2598
Pro Glu Val Asp Thr Tyr Arg Pro Phe Gln Gly Thr Met Gly Val Cys
760 765 770

cct ccc tcc cca ccc acc ata tgc tcc agg gcc cca act gca aag ttg 2646
Pro Pro Ser Pro Pro Thr Ile Cys Ser Arg Ala Pro Thr Ala Lys Leu
775 780 785

gcc act gag gag cca cct cct cgc tcc cct gag tct gag agt gaa 2694
Ala Thr Glu Glu Pro Pro Arg Ser Pro Pro Glu Ser Glu Ser Glu
790 795 800

ccg tac acc ttc tcc cat ccc aac aat ggg gat gta agc agc aag gac 2742
Pro Tyr Thr Phe Ser His Pro Asn Asn Gly Asp Val Ser Ser Lys Asp
805 810 815 820

aca gac att ccc tta ctg aac act cag gag ccc atg gag cca gca gaa 2790
Thr Asp Ile Pro Leu Leu Asn Thr Gln Glu Pro Met Glu Pro Ala Glu
825 830 835

taa cttgatccat tccagacgct ttgctgagtt tcataaagca gggcactgag 2843

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<212> PRT
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20 25 30
Ala Leu Pro Arg Glu Ser Asn Ile Thr Val Leu Ile Lys Leu Gly Thr
35 40 45
Pro Thr Leu Leu Ala Lys Pro Cys Tyr Ile Val Ile Ser Lys Arg His
50 55 60
Ile Thr Met Leu Ser Ile Lys Ser Gly Glu Arg Ile Val Phe Thr Phe
65 70 75 80
Ser Cys Gln Ser Pro Glu Asn His Phe Val Ile Glu Ile Gln Lys Asn
85 90 95

Ile Asp Cys Met Ser Gly Pro Cys Pro Phe Gly Glu Val Gln Leu Gln
100 105 110

Pro Ser Thr Ser Leu Leu Pro Thr Leu Asn Arg Thr Phe Ile Trp Asp
115 120 125

Val Lys Ala His Lys Ser Ile Gly Leu Glu Leu Gln Phe Ser Ile Pro
130 135 140

Arg Leu Arg Gln Ile Gly Pro Gly Glu Ser Cys Pro Asp Gly Val Thr
145 150 155 160

His Ser Ile Ser Gly Arg Ile Asp Ala Thr Val Val Arg Ile Gly Thr
165 170 175

Phe Cys Ser Asn Gly Thr Val Ser Arg Ile Lys Met Gln Glu Gly Val
180 185 190

Lys Met Ala Leu His Leu Pro Trp Phe His Pro Arg Asn Val Ser Gly
195 200 205

Phe Ser Ile Ala Asn Arg Ser Ser Ile Lys Arg Leu Cys Ile Ile Glu
210 215 220

Ser Val Phe Glu Gly Glu Gly Ser Ala Thr Leu Met Ser Ala Asn Tyr
225 230 235 240

Pro Glu Gly Phe Pro Glu Asp Glu Leu Met Thr Trp Gln Phe Val Val
245 250 255

Pro Ala His Leu Arg Ala Ser Val Ser Phe Leu Asn Phe Asn Leu Ser
260 265 270

Asn Cys Glu Arg Lys Glu Glu Arg Val Glu Tyr Tyr Ile Pro Gly Ser
275 280 285

Thr Thr Asn Pro Glu Val Phe Lys Leu Glu Asp Lys Gln Pro Gly Asn
290 295 300

Met Ala Gly Asn Phe Asn Leu Ser Leu Gln Gly Cys Asp Gln Asp Ala
305 310 315 320

Gln Ser Pro Gly Ile Leu Arg Leu Gln Phe Gln Val Leu Val Gln His
325 330 335

Pro Gln Asn Glu Ser Asn Lys Ile Tyr Val Val Asp Leu Ser Asn Glu
340 345 350

Arg Ala Met Ser Leu Thr Ile Glu Pro Arg Pro Val Lys Gln Ser Arg
355 360 365

Lys Phe Val Pro Gly Cys Phe Val Cys Leu Glu Ser Arg Thr Cys Ser

370 375 380
Ser Asn Leu Thr Leu Thr Ser Gly Ser Lys His Lys Ile Ser Phe Leu
385 390 395 400
Cys Asp Asp Leu Thr Arg Leu Trp Met Asn Val Glu Lys Thr Ile Ser
405 410 415
Cys Thr Asp His Arg Tyr Cys Gln Arg Lys Ser Tyr Ser Leu Gln Val
420 425 430
Pro Ser Asp Ile Leu His Leu Pro Val Glu Leu His Asp Phe Ser Trp
435 440 445
Lys Leu Leu Val Pro Lys Asp Arg Leu Ser Leu Val Leu Val Pro Ala
450 455 460
Gln Lys Leu Gln Gln His Thr His Glu Lys Pro Cys Asn Thr Ser Phe
465 470 475 480
Ser Tyr Leu Val Ala Ser Ala Ile Pro Ser Gln Asp Leu Tyr Phe Gly
485 490 495
Ser Phe Cys Pro Gly Gly Ser Ile Lys Gln Ile Gln Val Lys Gln Asn
500 505 510
Ile Ser Val Thr Leu Arg Thr Phe Ala Pro Ser Phe Gln Gln Glu Ala
515 520 525
Ser Arg Gln Gly Leu Thr Val Ser Phe Ile Pro Tyr Phe Lys Glu Glu
530 535 540
Gly Val Phe Thr Val Thr Pro Asp Thr Lys Ser Lys Val Tyr Leu Arg
545 550 555 560
Thr Pro Asn Trp Asp Arg Gly Leu Pro Ser Leu Thr Ser Val Ser Trp
565 570 575
Asn Ile Ser Val Pro Arg Asp Gln Val Ala Cys Leu Thr Phe Phe Lys
580 585 590
Glu Arg Ser Gly Val Val Cys Gln Thr Gly Arg Ala Phe Met Ile Ile
595 600 605
Gln Glu Gln Arg Thr Arg Ala Glu Glu Ile Phe Ser Leu Asp Glu Asp
610 615 620
Val Leu Pro Lys Pro Ser Phe His His His Ser Phe Trp Val Asn Ile
625 630 635 640
Ser Asn Cys Ser Pro Thr Ser Gly Lys Gln Leu Asp Leu Leu Phe Ser
645 650 655

Val Thr Leu Thr Pro Arg Thr Val Asp Leu Thr Val Ile Leu Ile Ala
660 665 670

Ala Val Gly Gly Val Leu Leu Leu Ser Ala Leu Gly Leu Ile Ile
675 680 685

Cys Cys Val Lys Lys Lys Lys Lys Thr Asn Lys Gly Pro Ala Val
690 695 700

Gly Ile Tyr Asn Gly Asn Ile Asn Thr Glu Met Pro Arg Gln Pro Lys
705 710 715 720

Lys Phe Gln Lys Gly Arg Lys Asp Asn Asp Ser His Val Tyr Ala Val
725 730 735

Ile Glu Asp Thr Met Val Tyr Gly His Leu Leu Gln Asp Ser Ser Gly
740 745 750

Ser Phe Leu Gln Pro Glu Val Asp Thr Tyr Arg Pro Phe Gln Gly Thr
755 760 765

Met Gly Val Cys Pro Pro Ser Pro Pro Thr Ile Cys Ser Arg Ala Pro
770 775 780

Thr Ala Lys Leu Ala Thr Glu Glu Pro Pro Pro Arg Ser Pro Pro Glu
785 790 795 800

Ser Glu Ser Glu Pro Tyr Thr Phe Ser His Pro Asn Asn Gly Asp Val
805 810 815

Ser Ser Lys Asp Thr Asp Ile Pro Leu Leu Asn Thr Gln Glu Pro Met
820 825 830

Glu Pro Ala Glu
835

<210> 5
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<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 5
accgcctcaa cttgttcaca tgg

23

<210> 6
<211> 26

<212> DNA
<213> Kunstliche Sequenz

<220>
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<400> 6
ctgggtctcag gagccagcaa cttgtc 26

<210> 7
<211> 25
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<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 7
ctcatgacgt ggcagttgt cgttc 25

<210> 8
<211> 26
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 8
ggctcgctca ttactcaagt caacca 26

<210> 9
<211> 36
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<213> Kunstliche Sequenz

<220>
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<400> 9
attcgcgact gatgatcgat tttttttttt tttttt 36

<210> 10
<211> 20
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<213> Kunstliche Sequenz

<220>

<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 10

attcgcgact gatgatcgat

20

<210> 11

<211> 20

<212> DNA

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<220>

<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 11

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20

<210> 12

<211> 17

<212> DNA

<213> Kunstliche Sequenz

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<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 12

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17

<210> 13

<211> 22

<212> DNA

<213> Kunstliche Sequenz

<220>

<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 13

agtccatgtg aacaagttga gg

22

<210> 14

<211> 20

<212> DNA

<213> Kunstliche Sequenz

<220>
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<400> 14
aattctccca cctcagcctc 20

<210> 15
<211> 22
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<400> 15
aggatgaaaa cgacaatgtg cc 22

<210> 16
<211> 21
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<400> 16
agaatttgctt gagcccagga g 21

<210> 17
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<400> 17
caacttcaca ttgctcagtg g 21

<210> 18
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<400> 18
tgagcaagtt cagcctggtt aagtc

25

<210> 19
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<212> DNA
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<220>
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<400> 19
caccgaatac tcataaagaa ggtccc

26

<210> 20
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<220>
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<400> 20
tagacttcga gcaggagatg gccact

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ccagccatgt acgttagccat

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ccatcaccat cttccaggag cgaga 25

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<400> 24
ccaagaagga aggctggaa 19

<210> 25
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<400> 25
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<210> 26
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<400> 26
aaatcgtgca cttgcaggc 19

<210> 27
<211> 18
<212> DNA
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<220>
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<400> 27
ttgatgcgtt ccagctga 18

<210> 28
<211> 21
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<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 28
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<210> 29
<211> 19
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 29
tgaggcaac agtgatgtc 19

<210> 30
<211> 24
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 30
attggccttc cttaggctgg ctac 24

<210> 31
<211> 43

<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 31
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<210> 32
<211> 22
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 32
agggcgtggt accgagctcg ag 22

<210> 33
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<212> DNA
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<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 33
ggctcgagct c 11

<210> 34
<211> 22
<212> DNA
<213> Kunstliche Sequenz

<220>
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<400> 34
ggccatgtcc ggtgggcttg tg 22

<210> 35
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<212> DNA
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<220>
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<400> 35
ctcaaaaactc ctggacaagt tgctgg

26

<210> 36
<211> 22
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 36
aaggtgaagg tcggagtc aa cg

22

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